

APPENDIX H

SOIL BORING LOGS



9522770



BORING LOCATION ID:

DSE-11/BL-6

Page 1 of 1

Project Name: Delta Shipyard Reassessment

Site Location: 200 Dean Court, Houma

Terrebonne Parish, Louisiana

Project Number: 20406.012.019.0680.01

Logged By: E. Hadwin

Date(s) Drilled: 8/9/2012

Drilling Method: Direct Push Technology

Drilling Contractor:

Driller's Name:

Drilling Rig:

Total Depth: 8 ft

Completed Depth:

Borehole Diameter: 2 inch

Latitude:

Longitude:

Photos: 1551 - 1557

Remarks:

soil is stratified with organic matter lens; and with hydrocarbon contamination; ground water estimated at approximately 4 feet due to increase in soil moisture

Cutting Disposal: Return to sample location

Depth (ft)	Sample Type	Interval	Recovery	Organic Vapor (ppm)	Lithological Description	Analysis Interval	USCS Code	Graphic Log	Water Level	Well Completion	Installation Notes:
0					clay; very dark grey (7.5 YR 3/1); firm; high stiffness; moist; high plasticity; with limestone rocks	NA	NA	NA		NA	NA
1					clay; very dark grey (10 YR 3/1); firm; high stiffness; moist; high plasticity						
2					silt loam; black (gluey 1 2.5/N); hard; moist; medium dry strength; non plasticity						
3					clay loam; very dark grey (gluey 1 3/N); soft/firm; medium stiffness; moist; medium plasticity						
4					organic matter; black (gluey 1 2.5/N); moist						
5					silty clay loam; very dark grey (10YR 3/1); very soft/soft; low stiffness; low plasticity; moist/wet; hydrocarbon contamination						
6					uniformly-graded sandy loam; very dark brown (7.5YR 2.5/3) moist/wet; ; hydrocarbon contamination						
7					transition area; sandy clay loam; black (10 YR 2/1); moist; /low plasticity; soft; heavy hydrocarbon contamination; trace shell						
8					clay loam; dark grey (gluey 4/N); soft/firm; low/medium stiffness; medium plasticity; moist						



BORING LOCATION ID:

BL-1

Page 1 of 2

Project Name: Delta Shipyard Reassessment

Site Location: 200 Dean Court, Houma

Terrebonne Parish, Louisiana

Project Number: 20406.012.019.0680.01

Logged By: E. Hadwin

Date(s) Drilled: 8/10/2012

Drilling Method: Direct Push Technology

Drilling Contractor:

Driller's Name:

Drilling Rig:

Total Depth: 12 ft

Completed Depth:

Borehole Diameter: 2 inch

Latitude:

Longitude:

Photos: 1583 - 1590

Remarks:

soil is stratified with organic matter lens; 2 areas of no recovery; the no recovery areas are followed by different soil types of the previous recovered areas; ground water estimated at approximately 3 ft due to increase in soil moisture

Cutting Disposal: Return to sample location

Depth (ft)	Sample Type	Interval	Recovery	Organic Vapor (ppm)	Lithological Description	Analysis Interval	USCS Code	Graphic Log	Water Level	Well Completion	Installation Notes:
0					loam; very dark grayish brown (10YR3/2); soft; low stiffness; dry/moist; low plasticity; contained roots	NA	NA	NA		NA	NA
1											
2					clay; dark gray (10YR4/1) with 7-20% red mottling (2.5YR4/6); firm; medium/high stiffness; dry/moist; high plasticity						
3					clay loam; black (gluey 1 2.5/N); firm; medium stiffness; moist; medium plasticity; with 75% wood debris from 2.4 to 2.6 feet						
4					silty loam; black (7.5YR2.5/1); soft; low stiffness; moist/wet; low plasticity; with 25% organic matter						
5					??? No recovery						
6											
7					silty clay loam; black (7.5YR2.5/1); firm; medium stiffness; moist/wet; low plasticity						
8					clay; dark greenish gray (Gley 1 10GY4/1); firm; medium stiffness; moist; medium plasticity						

This log should not be used separately from the original report.



BORING LOCATION ID:

BL-2

Page 1 of 2

Project Name: Delta Shipyard Reassessment

Site Location: 200 Dean Court, Houma

Project Number: 20406.012.019.0680.01

Logged By: E. Hadwin

Date(s) Drilled: 8/10/2012

Drilling Method: Direct Push Technology

Drilling Contractor:

Driller's Name:

Drilling Rig:

Total Depth: 12 ft

Completed Depth:

Borehole Diameter: 2 inch

Latitude:

Longitude:

Photos: 1569 - 1575

Remarks:

soil is stratified with organic matter lens; 2 areas of no recovery that area to be continuations of previous cores; possible total depth 11 feet instead of 12 feet; ground water estimated at approximately 4 feet due to increase in soil moisture

Cutting Disposal: Return to sample location

Depth (ft)	Sample Type	Interval	Recovery	Organic Vapor (ppm)	Lithological Description	Analysis Interval	USCS Code	Graphic Log	Water Level	Well Completion	Installation Notes:
0						NA	NA	NA		NA	NA
1					silty clay loam; very dark gray to dark gray (10YR 3/1; 10YR4/1); firm; medium stiffness; dry/moist; approximately 3" fine grained sand lens; dark reddish brown (5YR3/4); moist						
2					silty loam; yellowish brown (10YR5/4); soft; low stiffness; dry/moist; low plasticity						
3					clay loam; dark gray (10YR4/1); firm; medium stiffness; moist; medium plasticity						
4					clay; black (10YR2/1); firm; medium stiffness; moist; high plasticity						
5					mixture of 50% organic matter and 50% loam; black (10YR2/1); soft/firm; low stiffness; moist; non plasticity						
6					??? No Recovery; possible continuation of previous core						
7					silty clay loam that contain more clay content at lower depth; transitions from very dark grayish brown (10YR3/2) to dark gray (Gley 1 4/N); soft/firm; low stiffness that increases with clay content; moist; low to medium plasticity; 0.5 organic matter lens between 6.5 - 7 feet; approximately 0.5 feet of top of core is possible surface slough						
8											

This log should not be used separately from the original report.

Project Name:	Delta Shipyard Reassessment
Site Location:	200 Dean Court, Houma Terrebonne Parish, Louisiana

Drilling Method: Direct Push Technology
 Drilling Contractor: _____
 Driller's Name: _____

Latitude:

Longitude:

[illegible]

This log should not be used separately from the original report.

Sample Type Symbols defined by ASTM D1586: SS- Split Spoon D-Dennison ST-Shelby Tube
MC-Macro Core CS-Continuous Sampler OT-Other CT-Cuttings

C:\Users\hadwine\Documents\START\Delta Shipyard\Delta Ship Yard Bore Log Photos\Bore Logs 1-15-12



BORING LOCATION ID:

BL-3

Page 1 of 1

Project Name: Delta Shipyard Reassessment
 Site Location: 200 Dean Court, Houma
 Terrebonne Parish, Louisiana
 Project Number: 20406.012.019.0680.01
 Logged By: E. Hadwin
 Date(s) Drilled: 8/10/2012

Drilling Method: Direct Push Technology
 Drilling Contractor:
 Driller's Name:
 Drilling Rig:
 Total Depth: 12 ft
 Completed Depth:
 Borehole Diameter: 2 inch

Latitude:

Longitude:

Photos: 1591 - 1597

Remarks:

soil is stratified with a 0.5 foot lens of black silty clay between 2.5 and 3 feet; 2 areas of no recovery; the first area of no recovery is followed by a different soil type as compared to previous core and the second area of no recovery is followed by soil similar to the previous core with possible loss of material; ground water estimated at approximately 4 ft due to increase in soil moisture
 Cutting Disposal: Return to sample location

Depth (ft)	Sample Type	Interval	Recovery	Organic Vapor (ppm)	Lithological Description	Analysis Interval	USCS Code	Graphic Log	Water Level	Well Completion	Installation Notes:
0						NA	NA	NA		NA	NA
1					clay; dark gray (10YR4/1) with 7-20% red (2.5YR4/6) mottles; firm; high stiffness; dry/moist; high plasticity						
2											
3					clay; dark gray (10YR4/1); soft/firm; medium stiffness; moist that increases at low depth; medium plasticity; approximately 0.5 foot black (10YR2/1) silty clay loam lens between 2.5 and 3 feet						
4											
5					??? No Recovery						
6											
7					silty clay loam; very dark gray (7.5YR3/1); soft/firm; medium stiffness; moist/wet; low plasticity						
8					clay; gray (Gley 1 5/N); firm; medium stiffness; moist; high plasticity						
9					silty clay loam; very dark gray (7.5YR3/1); soft/firm; medium stiffness; moist/wet; medium plasticity						

This log should not be used separately from the original report.

Sample Type Symbols defined by ASTM D1586: SS- Split Spoon D-Dennison ST-Shelby Tube
 MC-Macro Core CS-Continuous Sampler OT-Other CT-Cuttings

C:\Users\shadwine\Documents\START\Delta Shipyard\Delta Ship Yard Bore Log Photos\Bore Logs 1-15-12

Project Name:	Delta Shipyard Reassessment
Site Location:	200 Dean Court, Houma Terrebonne Parish, Louisiana

Drilling Method:	Direct Push Technology
Drilling Contractor:	
Driller's Name:	

Latitude:

Longitude:

[illegible]

This log should not be used separately from the original report.

Sample Type Symbols defined by ASTM D1586: SS-Split Spoon D-Dennison ST-Shelby Tube
MC-Macro Core CS-Continuous Sampler OT-Other CT-Cuttings

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BORING LOCATION ID:

BL-4

Page 1 of 2

Project Name: Delta Shipyard ReassessmentSite Location: 200 Dean Court, Houma

Terrebonne Parish, Louisiana

Project Number: 20406.012.019.0680.01Logged By: E. HadwinDate(s) Drilled: 8/10/2012Drilling Method: Direct Push Technology

Drilling Contractor: _____

Driller's Name: _____

Drilling Rig: _____

Total Depth: 12 ft

Completed Depth: _____

Borehole Diameter: 2 inch

Latitude: _____

Longitude: _____

Photos: 1558-1568

Remarks:

soil is stratified; 1 area of no recovery followed by soil of similar type to the previous core with possible loss of material; ground water estimated at approximately 5 ft due to increase in soil moisture and presence of reduced clay

Cutting Disposal: Return to sample location

Depth (ft)	Soil Type	Interval	Recovery (%)	Soil Color (Munsell)	Lithological Description	Soil Interval	USCS Code	Soil Log	Water Level	Well Completion	Installation Notes
0						NA	NA	NA		NA	
1											
2											
3					clay; dark grayish brown (10YR4/2); firm; high stiffness; dry/moist - moisture increase at lower depth; high plasticity; soil contains 7-20% of very fine red (2.5YR4/6) mottles within the top 2.5 feet						
4					clay loam lens; very dark brown (10YR2/2); soft/firm; low/medium stiffness; moist; low plasticity						
5					silty clay loam; brown (7.5YR4/2); soft/firm; low/medium stiffness; moist/wet; low plasticity						
6											
7					silty clay loam - clay content increase at lower depth; very dark grey (7.5YR3/1); soft/firm; low/medium stiffness; moist/wet - moisture increase at lower depth; medium plasticity						
8											

This log should not be used separately from the original report.

Sample Type Symbols defined by ASTM D1586: SS- Split Spoon D-Dennison ST-Shelby Tube
MC-Macro Core CS-Continuous Sampler OT-Other CT-Cuttings

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BORING LOCATION ID:

BL-5

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Project Name: Delta Shipyard Reassessment

Site Location: 200 Dean Court, Houma

Terrebonne Parish, Louisiana

Project Number: 20406.012.019.0680.01

Logged By: E. Hadwin

Date(s) Drilled: 8/10/2012

Drilling Method: Direct Push Technology

Drilling Contractor:

Driller's Name:

Drilling Rig:

Total Depth: 12 ft

Completed Depth:

Borehole Diameter: 2 inch

Latitude:

Longitude:

Photos: 1576 - 1582

Remarks:

soil is partially stratified, but mostly homogeneous; ground water estimated at approximately 4 ft due to increase in soil moisture and presence of reduced clay

Cutting Disposal: Return to sample location

Depth (ft)	Sample Type	Interval	Recovery	Organic Vapor (ppm)	Lithological Description	Analysis Interval	USCS Code	Graphic Log	Water Level	Well Completion	Installation Notes:
0					silty clay loam; very dark brown (10YR2/2) soft/firm; low stiffness; moist; low plasticity	NA	NA	NA		NA	NA
1					clay; very dark grey (7.5YR3/1); firm; medium stiffness; dry/moist; high plasticity						
2					silty clay loam lens; dark brown (7.5YR3/2); firm; low stiffness; moist; low plasticity						
3											
4											
5					clay; dark to very dark gray; soft/firm; medium/high stiffness; moist/wet - moisture increase at lower depth; medium/high plasticity; core contains approximately 0.5 foot lens of a mixture of black organic matter and clay loam that is moist; also bottom of core contain a 0.5 foot area of very dark brown/black clay loam						
6											
7											
8											

This log should not be used separately from the original report.



BORING LOCATION ID:

Page 1 of 2

Project Name: Delta Shipyard Reassessment

Site Location:

200 Dean Court, Houma

Terrebonne Parish, Louisiana

Project Number: 20406.012.019.0680.01

Logged By:

E. Hadwin

Date(s) Drilled:

8/7/2012

Drilling Method: Direct Push Technology

Drilling Contractor:

Driller's Name:

Drilling Rig:

Total Depth: 12 ft

Completed Depth:

Borehole Diameter: 2 inch

Latitude:

Longitude:

Photos: IMG 262 - 267

Remarks:

soil is stratified with hydrocarbon contamination within the 4 to 5 foot area; area of no recovery between 7 to 9 feet followed by similar soil type with possible loss of material; ground water estimated at approximately 3.5 feet due to increase in soil moisture

Cutting Disposal: Return to sample location

Depth (ft)	Sample Type	Interval Recovery	Organic Vapor (ppm)	Lithological Description	Analysis Interval	USCS Code	Graphic Log	Water Level	Well Completion	Installation Notes:
0					NA	NA	NA		NA	NA
1				loam; dark brown (7.5YR3/2) to black(7.5YR2.5/1); loose soil; low stiffness; dry/moist; non plasticity						
2										
3										
4				silty clay loam; very dark brown (7.5YR2.5/2) to black (7.5YR2.5/1); soft; low/medium stiffness; moist/wet - moisture increase at lower depth; low plasticity; visual hydrocarbon contamination within the 4 to 5 foot area						
5										
6										
7				transition area to clay loam; dark gray (7.5YR4/1); firm; medium stiffness; moist/wet; medium plasticity						
8				??? No Recovery						

This log should not be used separately from the original report.

